



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Treado et al. :
: Examiner: Lauchman, Layla G.
Serial No.: 10/773,077 :
: Group No.: 2877
Filed: February 5, 2004 :
: Attorney Docket No.: 030687
: :
For: Near Infrared Chemical :
Imaging Microscope :

**INFORMATION DISCLOSURE STATEMENT
PURSUANT TO 37 C.F.R. §§ 1.56 ET SEQ.**

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 C.F.R. § 1.97(c), the above-identified Applicants cite the following patents and publications, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. § 1.56. In compliance with 37 C.F.R. § 1.98(a), copies of the patents and publications set forth below and listed on the attached Form PTO/SB/08A-B (8 sheets) have been provided.

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Date of Deposit October 5, 2005

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Name Daniel H. Golub

Signature 

<u>Patent No.</u>	<u>Patentee</u>	<u>Issue Date</u>
5,194,912	Batchelder et al.	03-16-1993
5,377,003	Lewis et al.	12-27-1994
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PATRICK J. TREADO, Letter to Peter V. Foukal, Ph.D., October 24, 1996.

PATRICK J. TREADO, Letter to Peter Miller, October 28, 1996.

The following publication is being submitted with confidential financial information redacted from the text as indicated. If the Examiner is interested in reviewing any of the redacted information, he/she is invited to contact the undersigned.

PATRICK J. TREADO, "A Miniaturized Raman Fiberscope for Remote Chemical Imaging," Proposal Submitted to the Ben Franklin Technology Center of Western Pennsylvania, March 21, 1997.

The following publication is being submitted without pages 11 and 12. The Applicants have undertaken a diligent search of their files but have not found a copy of this publication containing pages 11 and 12. It is also submitted with confidential financial information redacted from the text as indicated. If the Examiner is interested in reviewing any of the redacted information, he/she is invited to contact the undersigned.

PATRICK J. TREADO, "A Raman Endoscope for Breast Cancer Diagnosis," Proposal submitted to the Ben Franklin Technology Center of western Pennsylvania, April 8, 1998.

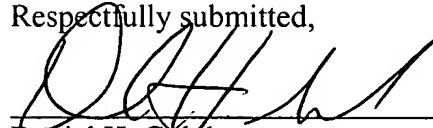
Applicants respectfully request that these items be considered by the Examiner, and that the Examiner acknowledge consideration of these references by initialing and returning copies of the enclosed Form PTO/SB/08A-B with the next official action.

While this Information Disclosure Statement may be "material" pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to herein is "prior art" for this invention or otherwise material to the patentability of this invention as defined in 37 C.F.R. § 1.56.

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The Commissioner is hereby authorized to charge any fees that may be due in connection with this submission, including the fee due required by § 1.197(c) under § 1.17(p), to Deposit Account No. **50-0310**. A duplicate copy of this page is enclosed.

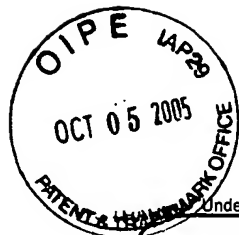
Respectfully submitted,

A handwritten signature in black ink, appearing to read 'D. Golub', is written over a horizontal line.

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Sharon B. McCullen
Reg. No. 54,303
Attorneys for Applicant

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Dated: October 5, 2005

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

1

of

1

Complete if Known

Application Number	1017731077
Filing Date	February 5, 2004
First Named Inventor	Treado
Art Unit	2877
Examiner Name	Lachman, Hayla G.
Attorney Docket Number	030687

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	A	US- 5,194,912	03-16-1993	Batchelder et al.	
	B	US- 5,377,003	12-27-1994	Lewis et al.	
	C	US- 5,377,004	12-27-94	Owen et al.	
	D	US- 5,442,438	08-15-1995	Batchelder et al.	
	E	US- 5,493,443	02-20-1996	Simon et al.	
	F	US- 5,528,393	06-18-1996	Sharp et al.	
	G	US- 5,623,342	04-22-1997	Baldwin et al.	
	H	US- 5,689,333	11-18-1997	Batchelder et al.	
	I	US- 5,710,626	01-20-1998	O'Rourke et al.	
	J	US- 5,862,273	01-19-1999	Pelletier	
	K	US- 5,901,261	05-04-1999	Wach	
	L	US- 5,911,017	06-08-1999	Wach et al.	
	M	US- 5,943,122	08-24-1999	Holmes	
	N	US- 6,002,476	12-14-1999	Treado	
	O	US- 6,088,100	07-11-2000	Brenan et al.	
	P	US- 6,483,641	11-19-2002	MacAulay	
	Q	US- 6,571,117	05-27-2003	Marbach	
	R	US- 6,300,618	10-09-2001	Tanaami et al.	
	S	US- 5,381,236	01-10-1995	Morgan	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	T	PCT/CA98/00092	08-13-1998	Raz et al.		
	U	WO95/11624	05-1995	Feld et al.		
	V	EP 0174778 B1	11-30-88	Mumford		

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STATEMENT BY APPLICANT**

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Sheet 12 of 0**Complete if Known**

Application Number	101773,077
Filing Date	Feb 5, 2004
First Named Inventor	Treado
Art Unit	2877
Examiner Name	lauchman, kayla G.
Attorney Docket Number	030687

U. S. PATENT DOCUMENTS

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	W	US- 6,274,871	08-14-2001	Dukor et al.	
	X	US- 6,614,532	09-02-2003	Power et al.	
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	Z	US- 6,530,882	03-11-2003	Farkas et al.	
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	JJ	US- 6,222,970	04-24-2001	Wach et al.	
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Sheet 3

of

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Complete if Known

Application Number	1101773.077
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Filing Date	Feb 5, 2004
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First Named Inventor	Treado
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Art Unit	2877
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Examiner Name	Lauchman, Layla G.
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Attorney Docket Number	030687
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U. S. PATENT DOCUMENTS

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FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Application Number	: 10/773,077
		Filing Date	February 5, 2004
		First Named Inventor	Treado
		Art Unit	: 2877
		Examiner Name	: Lavchman, Hayla G.
Sheet 4	of 8	Attorney Docket Number	030687

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	WW	SKINNER et al. "Remote Raman Microimaging Using An AOTF and a Spatially Coherent Microfiber Optical Probe," Applied Spectroscopy, Vol. 50 No. 8, (1996) pp.1007- 1014 .	
	XX	I. LEWIS AND P. GRIFFITHS, "Raman Spectrometry with Fiber-Optic Sampling," Applied Spectroscopy, Vol. 50, No. 10, (1996) pp. 12A-29A .	
	YY	TREADO et al., "Indium Antimonide (InSb) Focal Plane Array(FPA) Detection for Near-Infrared Imaging Microscopy," Applied Spectroscopy 48. (1994) p. 607.	
	ZZ	SHUKLA et al., "A Raman Scattering From Ultraheavily-Iron Implanted and Laser-Annealed Silicon," Physical Review B. Vol. 34, No. 12, 15 December 1986, pp. 8950-8953.	
	A'	DEWILTON et al., "A Raman Study of the Dopant Distribution in Submicron Pn Junctions in B+ or BF2+ Ion Implanted Silicon," SPIE Vol. 623 Advanced Processing and	
		Characterization of Semiconductors III (1986) pp. 26-34.	
	B'	KIRILOV et al., "Amorphous Phase Transformation During Rapid Thermal Annealing of Ion-Implanted Si," Mat'l Res. Soc. Symp. Proc., Vol. 52 (1986) pp. 131-138.	
	C'	MIZOGUCHI et al., "Raman Image Study of Flash-Lamp Annealing of Ion-Implanted Silicon," Journal of Applied Physics 77 (7) 1 April 1995, pp. 3388-3392.	
	D'	OTHONOS et al., "Raman Spectroscopy and Spreading Resistance Analysis of Phosphorous Implanted and Annealed Silicon," Journal of Applied Physics, 75 (12) 06/94, pp. 8032-8038.	
	E'	OTHONOS et al., "Multi-Wavelength Raman Probing of Phosphorus Implanted Silicon Wafers," Nucl. Instr. and Meth. in Phys. Rev. B., 117 (1996) pp. 367-374.	

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Complete if Known

Application Number	1017731077
Filing Date	February 5, 2004
First Named Inventor	Treado
Art Unit	2877
Examiner Name	Lauchman, Layla G.
Attorney Docket Number	030687

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	F'	CHRISTOFIDES et al., "Reconstruction Mechanisms in Ion Implanted and Annealed Silicon Wafers," Defect and Diffusion Forum, Vols. 117-118 (1985) pp. 45-64	
	G'	ISHIOKA et al., "Reduction in Raman Intensity of Si (1 1 1) Due to Defect Formation During Ion Irradiation," Solid State Communications, Vol. 96, No. 6 (1995) pp. 387-390 .	
	H'	DEY et al., "Raman Scattering Characterization of Si(100) Implanted With Mega-Electron-Volt Sb", Journal of Applied Physics 87(3) 1 February 2000, pp. 1110-1116.	
	I'	JAIN et al., "Raman Scattering From Ion-Implanted Silicon," Physical Review B., Vol. 32, No. 10, 15 November 1985, pp. 6688-6691.	
	J'	DEWILTON et al., "Raman Spectroscopy For NonDestructive Depth Profile Studies Of Ion Implantation In Silicon", J. Electrochem. Soc.: Solid State Science And Technology, May 1986, pp. 988-993.	
	K'	ZHANG et al., "Details of Damage Profile in Self-Ion-Implanted Silicon," Vol. 25 Journal of Raman Spectroscopy, (1994) pp. 515-520 .	
	L'	GORELICK, "Raman and Non-Linear Light Scattering From Undersurface Layers Of Ion Implanted Silicon Crystals," Materials Science Forum, Vol. 173-174 (1995) pp. 237-242.	
	M'	MORRIS, HOYT, MILLER and TREADO, "Liquid Crystal Tunable Filter Raman Chemical Imaging," Applied Spectroscopy, No. 50, No. 6, June 1996 pp. 805-811.	

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Application Number	10/773,077
Filing Date	February 5, 2004
First Named Inventor	Treado
Art Unit	2877
Examiner Name	Lauchman, Layla G.
Attorney Docket Number	030687

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	N'	NAKASHIMA et al., "Raman Microprobe Study of Recrystallization in Ion-Implanted and Laser-Annealed Polycrystalline Silicon," Journal of Applied Physics 54(5) 05/83 pp. 2611-2617.	
	O'	PATRICK J. TREADO, "Chemical Imaging Reveals More Than The Microscope," Laser Focus World, October, (1995) pp. 1-7.	
	P'	MORRIS, "Utrasensitive Raman and Fluorescence Imaging Using Liquid Crystal Tunable Filters," SPIE Vol. 2385, (1995) pp. 81-87.	
	Q'	ROBERT D. GUENTHER, "Modern Optics, Polarization By BiRefringence," (John Wiley & Son 1990) pp. 529-534.	
	R'	GERALD C. HOLST, "Electro-Optical Imaging System Performance," SPIE Optical Engineering Press, pp. 218-219, 238-239, 248-257, 266-269.	
	S'	JEFF HECHT, "Imaging and Illuminating Fiber Optics," Chapter 28, (3rd ed. 1999) pp. 567-581.	
	T'	TREADO et al., "Infrared Raman Spectroscopic Imaging," (Marcell Decker, 1992) pp. 71-108.	
	W'	TREADO et al., "A Thousand Points Of Light: The Hadamard Transform In Chemical Analysis And Instrumentation," Analytical Chemistry, Vol. 61, No. 11, June 1, 1989, pp. 723-734.	

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		Application Number	10/773,077
		Filing Date	February 5, 2004
		First Named Inventor	Treado
		Art Unit	2877
		Examiner Name	lauchman, kayla G.
Sheet 7	of 8	Attorney Docket Number 1030687	

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	W'	TREADO et al., "Near-Infrared Acousto-Optic Filtered Spectroscopic Microscopy: A Solid-State Approach To Chemical Imaging", Applied Spectroscopy, Vol. 46, No. 4, (1992)	
		pp. 553-559.	
	X'	MORRIS et al., "Imaging Spectrometers for Fluorescence and Raman Microscopy: Acousto-Optic and Liquid Crystal Tunable Filter," Applied	
		Spectroscopy, Vol. 48, No. 7 (1994) pp. 857-866.	
	Y'	TURNER et al., "LCTF Raman Chemical Imaging in the Near-Infrared," SPIE Vol. 3061 (1997) pp. 280-283.	
	Z'	"RAVEN Raman Imaging Fiberscope – A Tool for Insitu Material Analysis," Ben Franklin Technology Center of Western Pennsylvania, date unknown.	
	AA'	TREADO et al., "Engineering Study of the Feasibility of Incorporating a Raman Notch Filter into the Higher Temperature (HT) Fiberscope," July 29, 1997.	
	BB'	TREADO et al., "Incorporation of a Band Pass Filter into a High Temperature Raman Illumination Fiberscope," February 15, 1999.	
	CC'	TREADO et al., "Incorporation of a Notch Filter into A High Temperature Raman Collection Fiberscope," July 20, 1998.	

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	DDI	MILLER, et al., "Multispectral Imaging with a Liquid Crystal Tunable Filter," SPIE, Vol. 2345 (1995), pp. 354-365.	
	EEI	MILLER, Peter, "High Definition Raman Imaging Microscope," National Science Foundation Small Business Innovation Research Program, June, 1994.	
	FFI	MILLER Peter J., "SBIR Phase I: High Definition Raman Imaging Microscope," Small Business Innovation Research (SBIR) Phase I, September 13, 2005.	
	GGI	MILLER, Peter J., "High Definition Raman Imaging Microscope," National Science Foundation SBIR Phase II Proposal, October, 1996.	
	HHI	TREADO, Patrick J., Letter to Peter V. Foukal, Ph.D., October 24, 1996.	
	II	TREADO, Patrick J., Letter to Peter Miller, October 28, 1996.	
	JJI	GONZALEZ et al., "Digital Image Processing," Addison-Wesley Publishing Co. (1992) pp. 21-79.	
	KKI	PATRICK J. TREADO, "A Miniaturized Raman Fiberscope for Remote Chemical Imaging," Proposal Submitted to the Ben Franklin Technology Center of Western Pennsylvania, March 21, 1	
	LLI	PATRICK J. TREADO, "A Raman Endoscope for Breast Cancer Diagnosis," Proposal submitted to the Ben Franklin Technology Center of Western Pennsylvania, April 8, 1998.	

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